VASQUEZ BOULEVARD/INTERSTATE 70 SITE
WORKING GROUP MEETING

FINAL MEETING SUMMARY

April 8, 1999
EPA Offices
999 18th Street,
Denver, CO

IN ATTENDANCE:

Working Group

Linda Larson, Heller Ehrman White & McAuliffe (Asarco)
Bob Litle, Asarco
Celia VanDerLoop, City and County of Denver, Dept. of Environmental Health
Joan Hooker, Clayton Neighborhood
Anthony Thomas, Clayton Neighborhood
Michael Maes, Elyria Neighborhood
Chuck Patterson, Globeville Neighborhood
Frances Hartogh, State of Colorado Attorney General's Office
Barbara O'Grady, State of Colorado, Dept. of Public Health and Environment
Jane Mitchell, Colorado Dept. of Public Health and Environment
Lorraine Granado, Swansea Neighborhood and Cross Community Coalition
Sandy Douglas, Cole Neighborhood
Bonnie Lavelle, EPA Region 8
Chris Weis, EPA Region 8
Matt Cohn, EPA Region 8
David Mellard, ATSDR
Susan Muza, ATSDR

Contact Group

Joyce Tsuji, Exponent (Asarco)
Ted Fellman, EPA Region 8
Michael Wenstrom, EPA Region 8
Art Varnado, EPA Region 8
Pat Courtney, EPA Region 8
Nancy Strauss, Colorado Department of Public Health and Environment
Marion Galant, Colorado Department of Public Health and Environment
Sonia Fleck, COPEEN
Teresa NeSmith, ATSDR
Sandee Coulberson, ATSDR

Facilitators

Louise Smart, CDR Associates
Mary Margaret Golten, CDR Associates
Tamara Sadoo, CDR Associates (notetaker)

Agenda Review

Mary Margaret Golten and Louise Smart requested that the group review the agenda and discuss whether they wished to adjourn early in order to see Charles Lee speak on Environmental Justice and his role at the EPA, or whether to conduct the complete Working Group meeting as scheduled.

The group asked for some more information on Charles Lee and Lorraine Granado supplied the background.

The community members caucused and decided they would like to see Charles Lee speak. The Working Group agreed to try to end the meeting early and prioritized and revised the agenda accordingly.

The agenda then included: community issues, the Risk-Based Sampling Results, ATSDR's Time Line, and update on community involvement.

Community Issues

Lorraine Granado addressed the matter of community involvement and the EPA. Lorraine explained that Ted Fellman and his staff should feel comfortable coming into the community and speaking with anyone in the neighborhoods. She said Ted Fellman and his staff do not need the permission of the Coalition to speak with the community. The Coalition would simply like to be informed about EPA communication in the community so that if the contacted community members have questions, the Coalition can provide information and background to them. The Coalition wants to ensure that the information that is shared is consistent. Ted Fellman thanked Lorraine Granado for that clarification.

Risk-Based Sampling: Presentation of Report

Bonnie Lavelle distributed a segment of the Risk Based Sampling Report and gave a preview of the contents of the report. The report includes data on 8 properties. Five of the properties had high concentrations of metals, and three of the properties had concentrations that were below the removal action level. The handout and presentation provided detailed information on the arsenic, lead, cadmium, and zinc concentrations found in the sampling that occurred at two properties—Location 1 and Location 6. The full report, detailing the findings at all eight properties included in the risk based sampling study, was distributed to the Working Group members at the meeting.

The report, as illustrated in the display of data on the two property examples, provides several graphic methods to show patterns of concentrations on the sampled properties. The graphics include: maps with colored dots, bar graphs showing concentrations of each metal at various depths, three-dimensional maps depicting levels of arsenic and lead concentrations, and color-coded maps showing the distribution of arsenic and lead. Bonnie cautioned the Working Group members to carefully check the color code for each diagram, as the color scheme varies with each type of display. One goal of the visual presentation of the data was to help determine whether there are patterns of contamination in the yards. Bonnie and Chris Weis made it clear that for precise concentration levels, the Working Group should refer to the raw data since the 3-D maps merely represent a visual estimation.

Where property owners granted permission, EPA sampled adjacent yards to determine if the patterns of contamination were similar across yards. Bonnie Lavelle noted that the EPA believes there is a boundary effect for these properties. The pattern of contamination in the yards is different from the patterns of contamination in adjacent yards.

Chuck Patterson asked whether EPA had established any background levels so that comparisons may be made for these results. Bonnie answered that the EPA had no background levels established yet.

Bonnie noted that at Location 1, lead concentrations decreased with the increase in depth. She pointed out that cadmium and zinc were below the level of concern.

Chuck Patterson commented that there appears to be a linear trend to the concentrations despite the boundary effect. He said this pattern might suggest that there are possible wind effects to consider.

In comparing Location 1 (a property with high concentrations of metals) and Location 2 (a property with low concentrations), Bonnie pointed out that the depth samples for the two properties are very different.

Bonnie explained that EPA will use this risk based sampling data to help decide how to sample in the future.

Dust Concentrations

EPA planned to take dust samples from all 18 properties that underwent removal. However, because 10 properties had insufficient amounts of dust, EPA was able to take dust samples from only 8 properties. Attic dust can give us clues to past patterns of contamination. Although the workplan called for the dust samples to be analyzed by a chemistry technique known as X-ray fluorescence, or "XRF," EPA conducted an analysis using the inductively coupled plasma, or ICP as well. Table 3.2.2, Summary Statistics for Attic and Household Dust compares the results of both techniques.

Chuck Patterson pointed out that the differences in resulting values for each test were significant. He said that since both tests are standardized and calibrated, they should not yield such widely varying results. Chuck requested a third method of analysis. Chris Weis responded that he shared these concerns regarding the results from the XRF and ICP testing and said that he would propose a third technique. The Working Group will be able to comment on this technique before it is implemented. Bonnie pointed out that there were also variations for the soil samples, and that different labs produce different results as well.

Anthony Thomas asked whether attic dust from adjacent properties was tested. Bonnie responded that those properties had not had their attic dust tested. Bonnie said that the Phase III sampling plan will include dust samples.

Chuck Patterson asked for clarification on the correlation between dust and soil concentrations. Chris Weis responded that in some cases exposure can come primarily from indoor activity. Lorraine Granado recommended that EPA could add clarification by identifying inside, outside, dust, dirt and furnace samples, along with their importance. Chris Weis added that furnaces are not currently being considered as an exposure pathway, but they are included in the conceptual site model indirectly by the dust exposure pathway.

Anthony continued by asking what the age of the homes were where the sampling had been conducted. If there is a difference in contaminant levels, pre- and post-WWII, the EPA might be able to determine where the contamination came from. Chuck Patterson said that since soil acts as a sieve and arsenic will sink into the soil over time via rainfall, testing can help determine age of contamination.

Celia VanDerLoop asked whether the EPA collected any information on what activities took place within the homes tested. Smoking for example would have an effect on cadmium levels. The answer is "no," information on activities of residents was not collected by EPA.

Chris Weis cautioned the Working Group to avoid drawing too many conclusions from the dust data, since the data has come from a small number of homes.

Lead (Pb) levels in Tap Water and Property Paint (exterior and interior)

Lead (Pb) levels were measured in tap water. Twelve out of eighteen homes participated in this testing. The residents did the sampling themselves. Table 3.2.3., Summary Statistics for Lead in Tap Water shows the results. The drinking water standard for lead, 15 micrograms of lead per liter of water, is based on predictions of blood lead.

Lead levels were tested in both exterior and interior paints of contaminated properties. Chris Weis pointed out that there is quite a bit of controversy regarding lead levels in paint and childhood lead poisoning. He said that the risk of childhood lead poisoning is

much more closely related to the deterioration of the paint than to the actual levels of lead in the paint. If lead in paint is greater than 1milligram per square centimeter, HUD (the Department of Housing and Urban Development) will take interest. By point of reference, EPA has discovered homes with 6mg/cm2 and will consider the condition of the paint (e.g., whether it is peeling or flaking) in assessments of lead risk.

Celia VanDerLoop inquired as to whether EPA looked at the condition of the paint when samples were taken and speciated the dust accordingly to establish whether the dust was paint or soil. Chris Weis responded that this was not done. Sonia Fleck suggested that during the next study, EPA analyze what is in the dust, such as paint.

Lorraine Granado asked whether there were any guidelines available for the public recommending how often paint needs to be changed. Chris Weis answered that no such guidelines exist.

Garden Vegetables

Table B.6., Analytical Results for Vegetables and Garden Soils represents the results of the sampling and testing done at one home out of 18 properties. Mint and potatoes were sampled. Concentrations of arsenic, lead, zinc and cadmium were all very low. Table B.6. also compares yard soil to garden soil. The yard soil results were those from removal properties.

Biomonitoring

Table 3.3.1., Summary Statistics for the Biomonitoring program conclude the report. Bonnie noted that the Biomonitoring results have been presented previously. She asked the community members if they would like to have copies of the Risk Based Sampling Report at repositories versus individual copies. The community responded repositories would be helpful as would electronic copies.

ATSDR Timeline

Susan Muza and David Mellard reviewed the revised timeline for ATSDR activities. Copies of the timeline were handed out to the Working Group along with a chart mapping out the parallel processes of ATSDR and the EPA. David explained that the timeline includes a combination of activities that ATSDR will do and is considering (may do).

Barbara O'Grady commented that her earlier concerns regarding the roles of the state and ATSDR had been addressed by the revised timeline.

Susan Muza explained to the group that ATSDR will make decisions in the summer of 1999 whether or not certain activities will be conducted for the VB/I-70 site.

ATSDR's health team will investigate health concerns based on questions they received from community members and from responses to questions they ask community members. ATSDR will look at the soil sampling results from the EPA and will determine whether there are any health effects due to the contaminant levels found in the soil sampling. ATSDR will conduct a literature review as well, to see what has been discovered health-wise with regard to these contaminants.

Celia VanDerLoop asked ATSDR which health registries they will look at. Susan Muza responded that both national and local registries will be used, depending on the disease being examined and which registries exist for those diseases. For example, Colorado does have cancer registries.

Chris Weis asked if the Working Group would be able to review the study plan before it is implemented. David Mellard said he thought so.

Susan continued by reviewing the chart tracking the parallel processes of ATSDR and the EPA. ATSDR begins by identifying the data needed to do a public health evaluation. ATSDR then conducts a public health evaluation of the data. ATSDR tries to address community health concerns and determines whether to take public health actions, such as studies and long-term surveillance to identify effects over time. Medical monitoring may be done in order to refer community members for further medical attention. Lorraine Granado asked whether the community would be evaluated. Susan replied that it may be a possibility depending upon time and availability of registries.

Celia VanDerLoop asked David Mellard if he was aware of any national registries which would provide a basis of comparison. David answered that the registries which exist would be available to ATSDR.

Lorraine Granado requested that the community be supplied with information about harmful effects caused by arsenic contamination. If the community had this information they could begin to look for certain signs of those effects.

ATSDR and the EPA will work closely together on the first two pieces, data needs identification and collection and baseline risk assessment. If ATSDR agrees with EPA's conceptual model, then ATSDR will use EPA's exposure pathways in its public health evaluation. If agreement is not reached by the EPA and ATSDR about the assumptions applied in the baseline risk assessment, it is possible that the ATSDR public health evaluation will reach different conclusions than the EPA baseline risk assessment.

David said that ATSDR will make various recommendations to different agencies. For example, ATSDR might make a recommendation to EPA that exposure to a certain level of arsenic should result in action.

Susan Muza has evaluated and made formal comments on the site conceptual model. David Mellard said he would need more time to give the site conceptual model a

thorough review in order to properly assess what issues ATSDR might approach differently, along with what ATSDR would and would not include as pathways. Chris Weis said this delay would slow down the risk assessment because the exposure pathways define the parameters. The pathways define how data is collected both at the source and result end. Chris said it would be very problematic to begin Phase Three sampling without agreement on the conceptual site model. Chris Weis and Bonnie Lavelle both noted that they do not want to pre-judge anything and that input from ATSDR is extremely important at this juncture.

Lorraine Granado stated that it is important for ATSDR to examine the site conceptual model extensively and requested that the Working Group be able to discuss and comment formally on any changes made to the site conceptual model. Several Working Group members said it was important that the process and design be carried out correctly from the start.

Lorraine inquired as to the cut-off time to apply for and receive Superfund money. Bonnie Lavelle answered that once the site is listed, it becomes eligible for cleanup money. The site will have to compete against other sites across the country for money at that time.

Chuck Patterson asked ATSDR why the medical monitoring was left until the end of the process. David Mellard responded that medical monitoring is usually done at the end but that it can certainly be moved ahead.

In response to a question by Mike Wenstrom, David Mellard provided the following definitions:

Health consultation: a report from ATSDR focused on one pathway or one issue (currently the health consultation is focused on garden fruits and vegetables).

Health assessment: a site-wide report that looks at all the pathways of the site and states ATSDR opinions on whether any of the exposures would constitute a health risk

Health investigation: an investigation of health conditions that examines what the health effects are in the community. Exposure assessment is a subset of Health Investigations.

Joan Hooker requested that ATSDR conduct medical studies of families that have been exposed on a long-term basis to determine health effects. She told the Working Group that her husband was exposed to something and died four years later.

David Mellard responded that sometimes a specific family might be referred by ATSDR to an occupational physician, or ATSDR might speak with personal/family physicians and inform them of the particular contaminants people are possibly being exposed to so the physician could look for particular effects in those people. Or it is possible that ATSDR might want to study the whole community . This would be based on

contamination levels and who in the community has been exposed to what. Presently, ATSDR has not yet determined whether they would carry out a long term study either on individuals or the community as a whole.

Celia VanDerLoop mentioned that ATSDR gave the State of Colorado a grant to work with individual family physicians to respond to and perform consultations on environmental exposures. Lorraine Granado asked how the state would use the ATSDR money. Nancy Strauss said the State Health Department has applied for and received funds for conducting health education and physician education around Superfund-caliber sites. They will identify a list of doctors that people in the area see, so information can be given to those doctors about what health concerns are associated with metals found in the area. Jane Mitchell added that the state health department has done physician education at other places in the state. In particular, Sally Thorsen has done this and could be invited to talk with the Working Group. Nancy Strauss described the Globe area medical monitoring program involving personal physicians—provided through the state's agreement with ASARCO. Jane Mitchell said that she knows of a person who does physician training and that a resource notebook exists already for physicians dealing with Superfund sites.

Community Involvement

Ted Fellman announced that a Community Involvement Plan was being drafted and will be completed by the next Working Group meeting. The plan will be available to the Working Group, the community, the State, and others for review, and comments are requested. A newsletter will be mailed out. A fact sheet on soil sampling was created for Cole and Clayton neighborhoods. The EPA would like to hold a meeting with those neighborhoods and requested help from the Coalition in setting up this meeting.

Bonnie Lavelle added that there will be a public meeting to present the Site Conceptual Model and Baseline Risk Assessment. Ted said that all of this information plus additional technical information will be included in the Community Involvement Plan.

Other Topics

ATSDR will put together a health team to address the concerns the community is raising. ATSDR has been responsive and will continue to be responsive to communities.

Bonnie Lavelle will mail out the Comparative Soil Study on Friday April 16, 1999 to everyone in the Working Group. She asked the Working Group to provide comments by the first week of May 1999.

Susan Muza announced that a Public Availability Session will be held on April 26 and 27, 1999 from 6:00 pm - 9:00 pm at (see flyer for details). There will be discussion on ATSDR's role, general hygiene, clean pets etc. The vegetable brochure will be

discussed and an organic gardener will attend the meeting to provide suggestions and information on how to decrease exposure to contaminants through gardening methods. Celia VanDerLoop asked whether other agencies can attend and supply information.

Nancy Strauss distributed a draft fact sheet and requested that the Working Group return comments to her by April 15, 1999. Nancy Strauss can be reached at: (303) 692-2785, or via e-mail: nancy.strauss@state.co.us

Louise Smart distributed pages with changes from the last meeting summary so that all members from the Working Group can see what comments have been made to date. If there are any other comments please contact either Louise Smart or Mary Margaret Golten at CDR: Tel: (303) 442-7367, Fax: (303) 442-7442, E-mails: Lsmart@mediate.org or Mmgolten@mediate.org

Future Working Group Meetings

May 6, 1999. Swansea Recreation Center, 8:30 AM - 1:00 PM

June 10, 1999. EPA Offices, 8:30 AM - 1:00 PM.

July 15, 1999. Swansea Recreation Center, 8:30 PM - 1:00 PM.

Time Line of ATSDR's
Public Health Assessment Activities for the VBI70 Site
Denver, Colorado

April 6, 1999

Fall 1998	Conduct initial contact with community and agencies
Winter 1999	Begin health education activity to explain ATSDR's activities
Winter 1999	Gather community concerns
Spring 1999	**Hold availability session for community with focus on health issues***
Spring 1999	Draft ATSDR's plan for the VBI70 Site
Spring 1999	Release ATSDR's health consultation on growing fruits and vegetables at the VBI70 site
Spring 1999	Draft fact sheets or develop other materials to provide information requested by the community (such as, how to reduce exposure to contaminated soil, definitions of environmental and health terms, etc.)
Summer 1999	**VBI70 health team conducts evaluation of soil data. Community representatives have asked that ATSDR specifically consider the following in its evaluation:** – investigate relationship between asthma and kidney disease (and other diseases) to exposure to site-related chemicals (cadmium, lead, arsenic, and zinc)** – consider risk from other sources (mobile sources, current industry, night-time odors)** – assure protection of sensitive groups (children, seniors)**
Summer 1999	**Release ATSDR's health consultation on the public health significance of contaminants in soil**

Summer 1999	Hold an availability or poster session for the community shortly after release of ATSDR's health consultation on soil. Conduct educational activities.
Summer 1999	**Decide whether or not ATSDR will conduct** the following activities for people living within the boundaries of the VBI70 site: **– an analysis of cancer rates (including leukemia)**** **– an analysis of lung, nose, and throat problems (including respiratory conditions, rhinitis, and sinusitis)** **– an analysis of skin problems** **– an analysis of children with remedial or special education problems** **– an analysis of headaches** **– an analysis of thyroid disease** **– an analysis of kidney disease** **– an analysis of gastrointestinal problems (including stomach pain, nausea and diarrhea)**
Summer 1999	Decide if health intervention activities are appropriate
January 19, 2000	Release draft public health assessment
Summer 2000	Release reports on any ATSDR analyses decided upon in summer 1999
Summer 2000	Conduct availability or poster session for community shortly after release of reports

* activities in bold are recent changes to the time line

** these activities are also mentioned in EPA's objectives for the VBI70 site